SIRF-104US PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appln. No:	10/632,051
Applicant:	Steve Gronemeyer
Filed:	July 30, 2003
Title:	SERIAL RADIO FREQUENCY TO BASEBAND INTERFACE WITH POWER CONTROL
TC/A.U.:	2618
Examiner:	Nguyen, Duc M.
Confirmation No.:	9974
Notice of Appeal Filed:	February 6, 2008
Docket No.:	SIRF-104US

SECOND REINSTATEMENT REQUEST AND SUPPLEMENTAL APPEAL BRIEF

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

SIR:

Appellants hereby request reinstatement of their appeal and submit this Supplemental Appeal Brief in response to the Non-Final Office Action dated June 9, 2009. Prior to this Non-Final Office Action, Applicants filed a Reinstatement Request and Supplemental Appeal Brief in response to a Non-Final Office Action dated October 21, 2008. This Non-Final Office Action was issued in response to the Appeal Brief filed August 11, 2008, which was filed in response to a Notice of Defective Appeal Brief dated June 26, 2009 concerning the Appeal Brief filed June 26, 2009 which was filed in response to the Final Office Action dated August 6, 2007 and Advisory Action dated November 13, 2007.

This Brief is presented in the format required by 37 C.F.R. § 41.37, in order to facilitate review by the Board.

The fees for filing the Notice of Appeal were paid when the Notice of Appeal was filed on February 6, 2008. The fees for the Brief in support of an Appeal under 37 C.F.R. § 41.20(b)(2) were paid when the Appeal Brief dated June 26, 2008 was filed. Pursuant to MPEP § 1207.04, fees representing the difference between the fees

previously paid and the current fees, together with a one-month extension fee required in connection with the filing of this Brief, are provided herewith.

I. REAL PARTY IN INTEREST

The real Party In Interest in this matter is SiRF Technology, Inc. by virtue of an assignments recorded on December 23, 2003, at Reel/Frame 014818/0651.

II. RELATED APPEALS AND INTERFERENCES

There are no pending appeals, judicial proceedings or interferences known to the applicants that may be related to, directly affect or be directly affected by or have a bearing on the Board of Patent Appeals and Interference's decision in the pending appeal.

III. STATUS OF CLAIMS

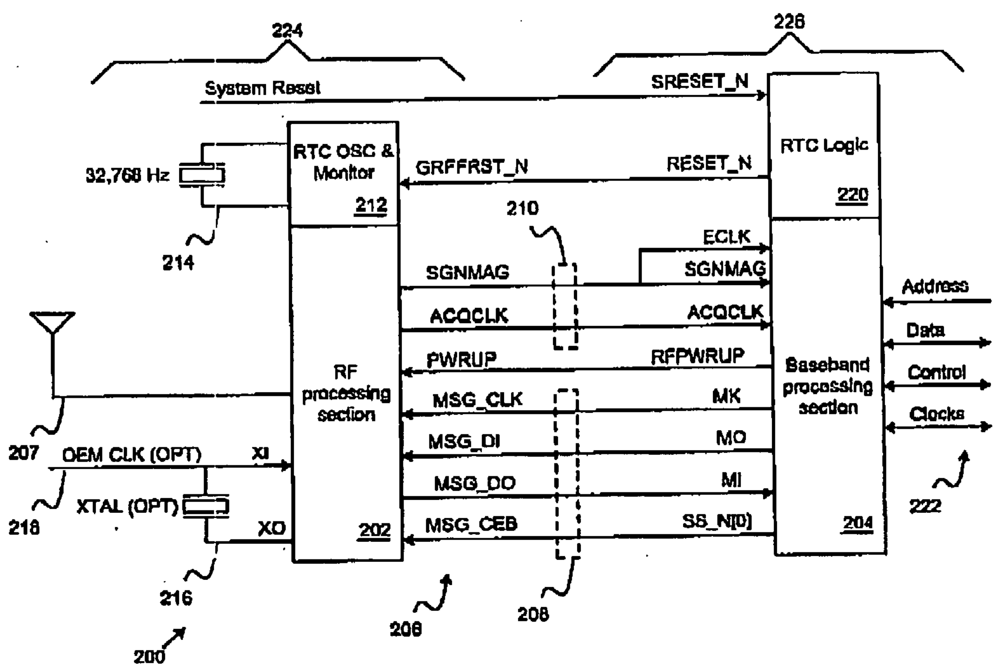
This is an appeal from the Non-Final Office Action dated March 9, 2009 rejecting claims, 1-20 and 22-31 and objecting to claim 21 as being dependent from a rejected base claim. This Final Office Action provides an explanation of how the pending claims 1-24 and 31 would be rejected.

IV. STATUS OF AMENDMENTS

No amendments to the specification or claims have been made subsequent to the mailing of the Final Office Action of August 6, 2007.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The invention provides radio frequency (RF) power control messaging, as well as related methods of providing RF power control messaging, over an interface between an RF processing section and a baseband processing section. The interface supports general purpose bi-directional message transmission between the RF processing section and the baseband processing section. The interface further supports transmission of satellite positioning system (SPS) signal samples between the two processing sections without adding undue complexity to the interface.



Referring to Figure 2 of the application (shown above), an interface 206 includes a message serial interface 208 and a data serial interface 210. The message serial interface 208 <u>provides for serial communication of general purpose messages bi-directionally between the RF section 202 and the baseband section 204</u>. In contrast, the RF section 202 employs the data serial interface 210 to transmit SPS signal samples to the baseband section 204.

The message serial interface 208, as shown in Figure 2, Includes the message-In signal line (labeled MSG_DO/MI), a message-out signal line (Labeled MSG_DI/MO), a message clock signal line (MSG_CLK/MK), and a slave select signal line (labeled MSG_CEB/SS_N[0]). The labels on the message signal lines indicate the direction of data flow from the perspective of the RF section 202/baseband section 204. For example, the message-out signal line (MSG_DI/MO) carries message bits input to the RF section 202 and output by the base band section 204.

A power control signal (labeled PWRUP/RFPWRUP) may be provided to control whether certain portions of the RF section 202 are powered-up. The power control signal may be connected, for example, to a voltage regulator enabled pin in the RF section 202 to provide a coarse power-up/power-down control over the majority of the circuitry in the RF section 202. The RTC OSC & Monitor section 212 is separately powered so that it can continue to provide a clock to the baseband section 204. The baseband processing side ay include an RTC logic section 220. The RTC logic section 220 accepts the input clock generated by the RTC OSC & Monitor section 212 as an aide in determining the current time as well as SPS location.

Messaging used by the serial interface for controlling the different portions of the RF chip 102 are shown in TABLE 4 on pages 19-21 of Applicants' patent application. TABLE 4 Include messages for controlling power to the fractional N synthesizer, PLL and divider chain, first LNA, Oscillator, ACQCLK-Select mux and ACQCLK driver, Front end power for 2nd low noise amplifier through A/D converter. Further, separate messages are for testing purposes, such as partition the reception chain in the RF section 202 for testing, specifying the synthesizer charge pump output and test modes, specifies the divider for PLL feedback.

Now turning to the independent claims, claim 1 recites: a radio frequency (RF) to baseband interface (206, FIG. 2, and paragraph [0023]) providing power control over an RF section (202, FIG. 2, and paragraph [0023]) that processes RF signals and that is coupled to a baseband section (204, FIG. 2, and paragraph [0023]) that processes baseband signals, the interface comprising, a bi-directional message interface (208, FIG. 2, and paragraph [0028]) for communicating a power control message (FIG. 2, and paragraph [0036]) from the baseband section (206, Fig. 2, and paragraph [0023]) to the RF section that is associated with power

consumption (paragraph [0036]) of the RF section (202, FIG. 2, and [0023]); and a data Interface (210, FIG. 2, and paragraph [0028]) for communicating data from the RF section (202, FIG. 2, and paragraph [0023]) to the baseband section (206, FIG. 2 and paragraph [0023]).

Similarly, independent method claim 8 recites: a method for controlling power in a radio frequency (RF) section that processes RF signals and that is coupled to a baseband section (206, FIG. 2 and paragraph [0023]) that process baseband signals, the method comprising the steps of: setting a power control bit (Tables 9-11 in specification and paragraph [0066]) in a power control message (Tables 9-11 in specification and paragraph [0066]); and communicating the power control message (Tables 9-11 in specification and paragraph [0066]) over a message interface from the baseband section (206, FIG. 2 and paragraph [0023]) to the RF section (202, FIG. 2 and paragraph [0023]) where the power control message is assoicated with power consumption of the RF section (paragraph [0067]).

Iindepedent claim 14 recites: an RF front end (224, FIG. 2, and paragraph [0024]) for a satellite positioning system receiver (200, FIG. 2, and paragraphs [0022-0023]), the front end comprising: an RF processing section (202, FIG. 2, and paragraph [0025]) comprising an RF input (207, FIG. 2, and paragraph [0025]) for receiving satellite positioning system signals; and an RF to baseband interface (206, FIG. 2, and paragraph [0023]) coupled to the RF processing section (202, FIG. 2, and paragraph [0025]), the interface comprising: a bi-directional message interface (208, FIG. 2, and paragraph [0028]) for communicating messages between the RF processing section (202, FIG. 2, and paragraph [0025]) and a baseband processing section (204, FIG. 2, and paragraph [0025]), that receives a power control message (Tables 9-11 in specification and paragraph [0066]) from the baseband processing section (204, FIG. 2, and paragraph [0025]) wherein the power control message is associated with power consumption of the RF processing section (paragraph [0067]); and a data interface (210, FIG. 2, and paragraph [0028]) for communicating data from the RF processing section (202, FIG. 2, and paragraph [0025]) to the baseband processing section (204, FIG. 2, and paragraph [0025]).

Independent claim 22 recites: a baseband back end (226, FIG. 2, and paragraph [0024]) for a satellite positioning system receiver (200 FIG. 2, paragraphs

[0022-0023]), the back end comprising: a baseband processing section (204, FIG. 2, and paragraph [0025]) comprising at least one address, data, and control line for communicating with a digital device (222, FIG. 2, and paragraph [0024]); and an RF to baseband interface (206, FIG. 2 and paragraph [0023]) coupled to the baseband processing section (204, FIG. 2, and paragraph [0025]), the interface comprising: a bi-directional message interface (208, FIG.2, and paragraph [2008]) for communicating messages between an RF processing section (202, FIG. 2, and paragraph [0025]) and the baseband processing section (204, FIG. 2, and paragraph [0025]), including communicating a power control message (Tables 9-11 in specification and paragraph [0066]) to the RF processing section (202, FIG. 2, and paragraph [0025]) where the power control message (Tables 9-11 in specification and paragraph [0066]) is associated with power consumption of the RF processing section (paragraph [0067]); and a data serial interface (210, FIG. 2, and paragraph [0028]) for communicating data from the RF processing section (202, FIG. 2, and paragraph [0025]) to the baseband processing section (204, FIG. 2, and paragraph [0025]).

Turning to the final independent claim, claim 28 recites: a satellite positioning system receiver (paragraphs [0022-0023]) comprising: an RF front end (224, FIG. 2, and paragraph [0024]) comprising an RF processing section (202, FIG. 2, and paragraph [0025]) and an RF input (207, FIG. 2, and paragraph [0025]) for receiving satellite positioning system signals; a baseband back end (226, FIG. 2, and paragraph [0024]) comprising a baseband processing section (204, FIG. 2, and paragraph [0025]) and at least one address, data, and control line for communicating with a digital device (222, FIG. 2, and paragraph [0024]); and an RF to baseband interface (206, fIG. 2 and paragraph [0023]) coupled between the RF processing section (202, fIG. 2, and paragraph [0025]) and the baseband processing section (204, FIG. 2, and paragraph [0025]), the interface comprising: a bi-directional message interface (208, FIG. 2, and paragraph [2008]) for communicating messages between the RF processing section (202, FIG. 2, and paragraph [0025]) and the baseband processing section (204, FIG. 2, and paragraph [0025]), including communicating a power control message (Tables 9-11 in specification and paragraph [0066]) to the RF processing section (202, FIG. 2, and paragraph [0025]), where the power control message (Tables 9-11 in specification

and paragraph [0066]) is associated with power consumption (paragraph [0067]) of the RF processing section (202, FIG. 2, and paragraph [0025]); and a data interface (210, FIG. 2, and paragraph [0028]) for communicating data from the RF processing section (202, FIG. 2, and paragraph [0025]) to the baseband processing section (204, FIG. 2, and paragraph [0025]).

VI. GROUNDS FOR REJECTION TO BE REVIEWED ON APPEAL

1) Claims 1-13 were rejected under 35 U.S.C. § 103(a) as being obvious over Molnar et al. (U.S. published application no. 2002/0142741, hereinafter "Molnar") in view of Kerth et al. (U.S. published application no. 2002/0132648, hereinafter "Kerth").

2) Claims 14-20 and 22-33 were rejected under 35 U.S.C. § 103(a) as being obvious over Molnar in view of Kerth and Syrjarinne et al. (U.S. published application no 2003/0107514, hereinafter "Syrjarinne").

3) Claims 1-13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kerth in view of Molnar.

4) Claims 14-20 and 22-33 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kerth in view of Molnar and Syrjarinne.

VII. ARGUMENT

A. Rejection of claims 1-13 as being obvious over Molnar in view of Kerth.

(1) Claims 1 and 8

The examiner has failed to state a *prima facie* case of obviousness because neither Molnar, Kerth nor their combination disclose or suggest, "a bi-directional message interface for communicating a power control message from the baseband section to the RF section that is associated with power consumption of the RF section," as required by claim 1, or "communicating the power control message over a message interface from the baseband section to the RF section where the power

control message is associated with power consumption of the RF section," as required by claim 8.

In the Office Action, it is asserted that Molnar discloses a serial message interface for communicating a power control message from the baseband section to the RF section that is associated with power consumption of the RF section. Applicant respectfully disagrees with this assertion. Molnar does not disclose or suggest sending any power control messages via the serial interface. In support of this assertion, the Examiner points to paragraph [0047] of Molnar. While this paragraph does describe a serial interface 332 via which control signals may be conveyed from the baseband module to the RF module, it does not disclose or suggest that any of these control signals may be a power control signal.

Indeed, Molnar teaches that power control of the RF module and the other modules in the system is accomplished by the power module 206. For example, paragraph [0040] states:

> The module 206 is coupled to a power supply 210. The power supply 210 may be a battery or other power source and may be implemented as a power management integrated circuit (PMIC) on a single die. The power module 206 controls the power supply for all of the other components of the mobile communications device 22.

Contrary to the assertion by the examiner, this passage indicates that power control in the mobile communications device is accomplished using a power management integrated circuit. This is the same type of integrated circuit that is used in Syrjarinne. (See paragraph [0037] of Syrjarinne). As described by Syrjarinne, the power control module 18 autonomously controls the duty cycle for powering on or off the various components of the GPS receiver; it does not respond to commands or messages from any component of the receiver.

Because Molnar uses a similar power control circuit but does not state how that control occurs, from knowledge of the state of the art, including Syrjarinne, the skilled person would understand that the power control module 206 autonomously controls power to the RF module. Thus, the skilled person would not understand Molnar as sending power control messages from the baseband module to the power control module.

Although Molnar does not explicitly describe the control messages that are sent, at paragraphs [0023] through [0025], Molnar describes several different GSM systems and describes how a particular receiver is assigned a frequency to be used in the GSM standard. From this description, the skilled person would understand that the control signals provided via the serial interface are to configure the RF module to a particular GSM standard and/or to configure the RF module to use a particular frequency band once that band has been assigned.

As set forth above, nothing in Molnar indicates that any of the control messages sent by the serial interface is a power control message. While Molnar describes providing a "standby voltage" from the baseband module to the RF module, this is not a signal but an operational power supply line. This voltage is provided for the sole purpose of retaining control signals that are stored by the RF module in the data latches 334, when the RF module is powered down. (See paragraph [0059] of Molnar, "[t]he one supply voltage maintained during shutdown, the baseband standby voltage at voltage level V_{BO}, maintains a voltage only for memory retention purposes").

Kerth does not provide the material that is missing from Molnar. Kerth describes an RF transceiver including baseband circuitry and RF circuitry with a bidirectional message interface, signal 960 of Fig. 9, coupled between them. There is no indication in Kerth, however, that any of the messages sent via this bidirectional interface is a power control message. Kerth does disclose a unidirectional signal line, PDNB, which is described as a control signal that controls the "power-down or serial interface mode." there is no description in Kerth, however, of any power down control that is implemented by this control signal.

Kerth discloses that the PDNB signal is an active-low signal that is used to disable the receiver circuitry so that it may be configured. (See paragraph [0095] of Kerth). The receiver circuitry is disabled by inhibiting the clock signals CKN and CKP. (See paragraphs [0100], [0134] and [0135]). Furthermore, at paragraphs [0057] and [0058], Kerth describes that, using the switch 492, the receiver disables itself and enables the transmitter before the transceiver enters transmit mode and that the transmitter disables itself and enables the receiver at the end of the transmission.

As disclosed by Kerth, the receiver and transmitter are disabled by inhibiting the reference clock signal 220.

Because Kerth does not disclose or suggest controlling power to the RF circuitry in order to disable the circuitry but, instead, discloses inhibiting clock signals, Kerth can not disclose or suggest the use of any power control message between the baseband circuitry and the RF circuitry. Thus, Kerth can not provide the material that is missing from Molnar.

As neither Molnar nor Kerth disclose this feature of claims 1 and 8, these claims are not subject to rejection under 35 U.S.C. § 103(a) over Molnar in view of Kerth. Claims 2-7 depend from claim 1 and claims 9-13 depend from claim 8. Accordingly, these claims are not subject to rejection under 35 U.S.C. § 103(a) over Molanr in view of Kerth for at least the same reasons as claims 1 and 8. In addition, as described below, claims 2, 3, 11, and 12 are not subject to rejection under 35 U.S.C. § 103(a) over Molnar in view of Kerth for reasons independent of their base claims.

(2) Claims 2 and 11

Regarding claims 2 and 11, in the Office Action, it is asserted that Molnar discloses that each data latch receives one bit of data from the serial interface for individually specifying power states for a plurality of pre-selected circuitry in the RF section. Applicants respectfully disagree with this assertion. Molnar is silent regarding any power control functions implemented by the data latches 334. Indeed, Molnar discloses that power control is accomplished using the power module 206.

(3) Claims 3 and 12

Regarding claims 3 and 12, in the Office Action, it is asserted that "Molnar would implicitly teach the power state is one of a power-up state and a power-down state." Applicants respectfully disagree with this assertion. In making this assertion, the Office Action cites to paragraphs [0059] and [0060]. These paragraphs state that the entire radio frequency integrated circuit may be powered down, except for the standby voltage V_{BO} provided by the baseband module 206, or powered up. This

language is consistent with the use of the power control module to control power rather than the data values held in the data latches 334.

B. Rejection of claims 14-20 and 22-33 as being obvious over Molnar in view of Kerth and Syrjarinne.

Syrjarinne does not provide the material that is missing from Molnar and Kerth. Syrjarinne was cited as disclosing a GPS receiver. In addition, in the Office Action, it is asserted that Syrjarinne discloses a low power standby mode for the GPS receiver for power saving. The power control in Syrjarinne, however, is implemented using a power control module that monitors the model mix provided by the model selector to define appropriate on-off duty cycles for the RF front end and baseband processor. The power control is implemented entirely in the power control module (See paragraphs [0030] and [0039]). Thus, Syrjarinne can not disclose or suggest "a bi-directional message interface for communicating a power control message from the baseband section to the RF section that is associated with power consumption of the RF section," as required by claim 1, or "communicating the power control message over a message interface from the baseband section to the RF section where the power control message is associated with power consumption of the RF section," as required by claim 8.

As set forth above, neither Molnar nor Kerth disclose these features of claims 1 and 8. Thus, claims 1 and 8 are not subject to rejection under 35 U.S.C. § 103(a) over Molnar in view of Kerth and further in view of Syrjarinne.

C. Rejection of claims 1-13 as being obvious over Kerth in view of Molnar.

In the Office Action, this second ground for rejecting claims 1-13 was made based on a different motivation to combine the references. As set forth above, however, neither of these references nor their combination discloses or suggests "a bi-directional message interface for communicating a power control message from the baseband section to the RF section that is associated with power consumption of the RF section," as required by claim 1, or "communicating the power control message over a message interface from the baseband section to the RF section

where the power control message is associated with power consumption of the RF section," as required by claim 8.

In the Office Action it is asserted that Kerth discloses this feature in paragraphs [0096] and [0116]. As stated in the Office Action, "Kerth teaches that during the normal mode of operation (or power-up state PBNB (sic) = 1), 'the transceiver disables the transmitter circuitry during the receiver mode of operation' and 'the transceiver disables the receiver circuitry during the transmit mode of operation.'" As described above, however, these circuits are disabled by inhibiting a clock signal, in this case, the reference signal 220. (See paragraphs [0056] to [0058]). The baseband circuitry described by Kerth does not send any power control messages to the RF circuitry. Instead, Kerth teaches disabling the transmitter and receiver by selectively inhibiting clock signals, either the reference signal 220 as described or the clock signals CKN and CKP as described in paragraphs [0097], [0134] and [0135]. This different reason for combining Kerth and Molnar does not provide the material that is missing as set forth above in the discussion of the rejection of claims 1-13 over Molnar in view of Kerth. Thus, claims 1 and 8 are not subject to rejection under 35 U.S.C. § 103(a) over Kerth in view of Molnar. Claims 2-7 depend from claim 1 and claims 9-13 depend from claim 8 so these claims are not subject to rejection under 35 U.S.C. § 103(a) over Kerth in view of Molnar for at least the same reasons as their base claims.

D. Rejection of claims 14-20 and 22-33 as being obvious over Kerth in view of Molnar and Syrjarinne.

As described above Syrjarinne does not provide the material that is missing from Molnar and Kerth. Thus, for the reasons set forth above in section B, claims 14-20 and 22-33 are not subject to rejection over Kerth in view of Molnar and further in view of Syrjarinne.

CONCLUSION

Allowance of claims 1-33 of the above-identified application is respectfully requested.

Respectfully submitted,

Kenneth N. Nigon, Reg. No. 31,549
Attorney for Applicant

Dated: October 8, 2009

P.O. Box 980
Valley Forge, PA 19482-0980
(610) 407-0700

The Director is hereby authorized to charge or credit Deposit Account No. 18-0350 for any additional fees, or any underpayment or credit for overpayment in connection herewith.

K_H:\NRPORTBL\RP\KEN\565101_1.DOC

VIII. CLAIMS APPENDIX

1. (Previously Presented) A radio frequency (RF) to baseband interface providing power control over an RF section that processes RF signals and that is coupled to a baseband section that processes baseband signals, the interface comprising:

a bi-directional message interface for communicating a power control message from the baseband section to the RF section that is associated with power consumption of the RF section; and

a data interface for communicating data from the RF section to the baseband section.

2. (Original) The interface of claim 1, where the power control message comprises a power control bit specifying a power state for pre-selected circuitry in the RF section.

3. (Original) The interface of claim 2, where the power state is one of a power-up state and a power-down state.

4. (Original) The interface of claim 1, where the power control message comprises a plurality of power control bits individually specifying power states for a plurality of pre-selected circuitry in the RF section.

5. (Original) The interface of claim 2, where the pre-selected circuitry is at least one of a frequency divider, oscillator, and amplifier.

6. (Original) The interface of claim 1, where the message interface is a serial message interface.

7. (Original) The interface of claim 1, where the message interface comprises a message-in signal line, a message-out signal line and a message clock signal line.

8. (Previously Presented) A method for controlling power in a radio frequency (RF) section that processes RF signals and that is coupled to a baseband section that processes baseband signals, the method comprising the steps of:

setting a power control bit in a power control message; and

communicating the power control message over a message interface from the baseband section to the RF section where the power control message is associated with power consumption of the RF section.

9. (Original) The method of claim 8, wherein the step of communicating comprises the step of serially communicating the power control message.

10. (Original) The method of claim 8, wherein the step of communicating comprises the step of serially communicating the power control message using a message-in signal line, a message-out signal line and a message clock signal line.

11. (Original) The method of claim 8, where the power control bit specifies a power state for pre-selected circuitry in the RF section.

12. (Original) The method of claim 11, where the power state is one of a power-up state and a power-down state.

13. (Original) The method of claim 8, where the step of setting comprises the step of setting a plurality of power control bits individually specifying power states for a plurality of pre-selected circuitry in the RF section.

14. (Previously Presented) An RF front end for a satellite positioning system receiver, the front end comprising:

an RF processing section comprising an RF input for receiving satellite positioning system signals; and

an RF to baseband interface coupled to the RF processing section, the interface comprising:

a bi-directional message interface for communicating messages between the RF processing section and a baseband processing section, including receiving a power control message from the baseband processing section wherein the power control message is associated with power consumption of the RF processing section; and

a data interface for communicating data from the RF processing section to the baseband processing section.

15. (Original) The RF front end of claim 14, wherein the message interface comprises:

a message clock line;

a message-in signal line and

a message-out signal line; and

wherein the message-out signal line carries an output bit stream representing the power control message.

16. (Original) The RF front end of claim 15, where the power control message comprises a power control bit specifying a power state for pre-selected circuitry in the RF section.

17. (Original) The RF front end of claim 16, where the power state is one of a power-up state and a power-down state.

18. (Original) The RF front end of claim 15, where the power control message comprises a plurality of power control bits individually specifying power states for a plurality of pre-selected circuitry in the RF section.

19. (Original) The RF front end of claim 15, where the pre-selected circuitry is at least one of a frequency divider, oscillator, and amplifier.

20. (Original) The RF front end of claim 15, where the data interface comprises a data clock signal line and a data bit signal line.

21. (Original) The RF front end of claim 20, where:

the data clock signal line carries a data clock comprising a rising edge and a falling edge;

the data bit signal line carries a data signal comprising a sign bit and a magnitude bit; and

the first data bit is valid on the rising edge of the data clock and the second data bit is valid on the falling edge of the data clock.

22. (Previously Presented) A baseband back end for a satellite positioning system receiver, the back end comprising:

a baseband processing section comprising at least one address, data, and control line for communicating with a digital device; and

an RF to baseband interface coupled to the baseband processing section, the interface comprising:

a bi-directional message interface for communicating messages between an RF processing section and the baseband processing section, including communicating a power control message to the RF processing section where the power control message is associated with power consumption of the RF processing section; and

a data serial interface for communicating data from the RF processing section to the baseband processing section.

23. (Original) The baseband back end of claim 22, wherein the message serial interface comprises:

a message clock line;

a message-in signal line and

a message-out signal line; and

wherein the message-out signal line carries an output bit stream representing the power control message.

24. (Original) The baseband back end of claim 22, where the power control message comprises a power control bit specifying a power state for pre-selected circuitry in the RF processing section.

25. (Original) The baseband back end of claim 24, where the power state is one of a power-up state and a power-down state.

26. (Original) The baseband back end of claim 22, where the power control message comprises a plurality of power control bits individually specifying power states for a plurality of pre-selected circuitry in the RF section.

27. (Original) The baseband back end of claim 26, where the pre-selected circuitry is at least one of a frequency divider, oscillator, and amplifier.

28. (Previously Presented) A satellite positioning system receiver comprising:

an RF front end comprising an RF processing section and an RF input for receiving satellite positioning system signals;

a baseband back end comprising a baseband processing section and at least one address, data, and control line for communicating with a digital device; and

an RF to baseband interface coupled between the RF processing section and the baseband processing section, the interface comprising:

a bi-directional message interface for communicating messages between the RF processing section and the baseband processing section, including communicating a power control message to the RF processing section where the power control message is associated with power consumption of the RF processing section; and

a data interface for communicating data from the RF processing section to the baseband processing section.

29. (Original) The satellite positioning system receiver of claim 28, wherein the message interface comprises:

a message clock line;

a message-in signal line and

a message-out signal line; and

wherein the message-out signal line carries an output bit stream representing the power control message.

30. (Original) The satellite positioning system receiver of claim 29, where the power control message comprises a power control bit specifying a power state for pre-selected circuitry in the RF processing section.

31. (Original) The satellite positioning system receiver of claim 30, where the power state is one of a power-up state and a power-down state.

32. (Original) The satellite positioning system receiver of claim 29, where the power control message comprises a plurality of power control bits individually specifying power states for a plurality of pre-selected circuitry in the RF section.

33. (Original) The satellite positioning system receiver of claim 32, where the pre-selected circuitry is at least one of a frequency divider, oscillator, and amplifier.

IX. EVIDENCE APPENDIX

None

X. RELATED PROCEEDINGS APPENDIX

None